

The Taunton Bay Study

Frank Dorsey - June 2, 2006

The Taunton Bay Study, a Pilot Project in Collaborative Bay Management was funded for one year in April 2005 - in part by the Maine State Planning Office, Maine Department of Marine Resources, and the National Oceanic and Atmospheric Administration and in part by Friends of Taunton Bay.

Talk Organization

- The Study was organized into five major working groups: **Economics, Governance, Indicators, Mapping/Information** and **Outreach**. These groups communicated by monthly, open to the public, meetings of work group representatives.
- This talk presents some of the findings of the study including problems - for some of which we propose solutions, some of which remain challenging.

MANAGEMENT STRUCTURE
THE TAUNTON BAY STUDY
A Pilot Project in Collaborative Bay Management

Friends of Taunton Bay

Executive Committee

Policy and budget oversight

Coordinating Committee

Member and alternate from each team

Outreach Team

Lauren Alnwick-Pfund
Barbara Arter
Ron Beard
Frank Dorsey
Shep Erhart
Lee Hudson
Lois Johnson
Vanessa Levesque
Steve Perrin
Natalie Springuel

Indicators Team

Brian Beal
Nick Brown
Deb Boswell Lane
Jane Disney
Laurie Osher
Slade Moore
Steve Perrin
Sue Schaller
Bob Steneck
Sean Todd

Economic Analysis Team

Barbara Arter
Shep Erhart
Heath Hudson

Governance Team

Lauren Alnwick-Pfund
Roger Fleming
Lee Hudson
Vanessa Levesque
Steve Perrin
Caroline Pryor
Barbara Welch

Information Mapping Team

Lauren Alnwick-Pfund
Frank Dorsey
Gordon Longworth
Steve Perrin

Note: FTB representatives underlined
Rev 07/12/05

Economics Working Group

- 8.5% of households in Hancock, Sullivan and Franklin depend on marine resources for some income
- Local harvesters held 12% of Hancock County licenses between 1999 and 2004. There was a 20% decline in area license holders in the period.
- Bay level catch data were not available except by interviews with individual harvesters. This resulted in a wide range of economic estimates:
\$4,000,000 to \$10,000,000

Economics Working Group Recommendations

- Consider a more **comprehensive review** of the local marine economy.
- Devise methods for **sharing bay- or harvester-level data** without threatening harvester confidentiality.
- Intensify efforts to **engage harvesters and town officials**.
- Develop action items to **address local fisheries management issues**.
- MDMR and other researchers should develop local maximum sustainable yield and optimum sustainable yield **models for the bay using ecosystem-based management principles**.

Indicators

- Costly in expertise, effort and dollars
- Need to be a mix of statewide standards and local necessities
- Critical to rational management
- Report Card format seems to be generally acceptable.

Indicators Schema

- **Species of Special Concern** (4) – Horseshoe crabs, harbor seals, shorebirds, **eagles**
- **Ecosystem and Structure** (4) – **Eelgrass spread and density, benthic invertebrates**, clam growth and predation, commercial landings
- **Toxicology** (3) – Mussel assay, **fecal coliform** bacteria, phytoplankton
- **Physical Conditions** (8) – **Weather**, dissolved oxygen, transparency, surface temperature, bottom temperature, etc
- **Watershed Concerns** (2) – Native vegetation buffers, septic systems
- **Other** (3) – Oyster set, invasive species, ecohistory narrative

(Blue indicates current monitoring by outside agency)

Selected Indicators Findings

- Horseshoe crabs “holding their own” in Egypt and Hog Bays.
- Harbor seal population is 75 – 80.
- Of 5 bald eagle nests, only one had reproductive success in 2005
- Flocks of migratory shorebirds are notably smaller than 20 years ago.
- A few eelgrass beds line the lower channel, but beds on the flats have yet to recover.
- Benthic invertebrate samples in Hog Bay included no clam worms and only small blood worms.
- No Asian shore crabs were found in Egypt Bay.
- Bay-specific landings data are not available for any harvested species.

Mapping

- Intended to develop transferable community mapping capabilities to provide products useful to collaborative decision making and bay management in a watershed setting
- Developed jointly with the Geographic Information Laboratory at College of the Atlantic
- Standards discussed with the Muscongus Bay project and and Maine Office of GIS

Map Themes

- Hydrology
- Aquaculture
- Fisheries
- Flat closures
- Primary Producers
- Eel grass decline
- Seal haulouts
- Eagle habitat
- Horseshoe crab sites
- Wildlife
- Biodiversity
- Soils suitability
- Bluff stability
- Estuary stress

Mapping and Information Issues

- Currency and compatibility of data
 - Not a one-time process
 - Costs and need for expertise
 - Confidentiality
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- Maps as a basis for stakeholder input
 - Maps as a basis for stakeholder education

Outreach

- Contacted more than 100 individuals
- Interviewed more than 50
- 70 attendees at public meetings and tour

Outreach Findings

- All want **clean water**, **green shores** and **job\$**
- Disagree on methods
- There is some common ground between harvesters and landowners

Common Ground

- Property owners and harvesters want to learn to communicate and work together
- All can educate others
- Make it easy to be good stewards
- Efforts should be rewarded
- Concern about aquaculture in Taunton Bay
- More monitoring is a source of jobs as well as information
- Sustainability, both ecologic and economic

Governance

- Agreed to four principles
- Agreed to general shape of a regional management structure
- Disagreed on where authority should lie
- Disagreed on details of implementation

Governance Principles

- 1. Public Trust**
- 2. Ecosystem-based Management**
- 3. Information-rich Management**
- 4. Integrated Land-and-Water-Use Management**

Next Steps

- Disseminate the report card and maps
- Respond to the red and yellow flagged items
- Developing a limited mud-flat management project

Conclusions

- Great success on technical issues
- Continuing conflict regarding many issues in spite of agreement on principles